

December 20, 2017

Dear Member of Congress,

Thank you for taking action to protect the Great Lakes against Ontario Power Generation's (OPG) proposed, so-called Deep Geologic Repository (DGR) for radioactive waste on the very shore of Lake Huron, at Bruce Nuclear Generating Station in Kincardine, Ontario, Canada. This includes your good letter to Secretary of State Tillerson dated June 7, 2017, which you sent alongside 31 other Members of Congress. The fight against the DGR is far from over, unfortunately, and we look forward to your continued leadership on this vital issue, and working with you, to see this threat to the Great Lakes stopped, once and for all.

We are writing to urge you to vote against another severe radioactive threat to the Great Lakes: H.R. 3053, the Nuclear Waste Policy Amendments Act of 2017. This bill, sponsored by U.S. Representative John Shimkus (Republican-Illinois), would expedite the opening, and significant expansion, of the proposed, and highly controversial, Yucca Mountain, Nevada permanent burial dump for commercial irradiated nuclear fuel and high-level radioactive waste.

This dangerously misguided bill would also authorize the opening of private, for-profit, so-called centralized interim storage facilities for commercial irradiated nuclear fuel. Currently, this is targeted at two sites on either side of the Texas/New Mexico state line, within less than 40 miles of each other: Waste Control Specialists, LLC in Andrews County, Texas; and Eddy-Lea [Counties] Energy Alliance in New Mexico, very near the Waste Isolation Pilot Plant (WIPP). WIPP, a U.S. Department of Energy (DOE) dumpsite for trans-uranic (TRU, comprised of plutonium, americium, and other artificial, radioactive elements beyond uranium on the periodic table) military contaminated wastes, leaked into the environment in 2014, internally contaminating nearly two-dozen workers at the surface with ultra-hazardous inhaled alpha radiation exposure, and also caused fallout in the downwind area. The burst of a single barrel of TRU waste in the WIPP underground led to a three-year facility shutdown, and will cost a whopping \$2 billion of federal taxpayer money to recover from. Frighteningly, OPG's DGR is modeled on WIPP.

Any one, or more, of these dumps opening, in Nevada, Texas, and/or New Mexico, would launch unprecedented numbers of commercial irradiated nuclear fuel shipments, by truck, train, and/or barge, via roads, rails, and/or waterways, in 44 states, including all eight Great Lakes states (and several dozen more states, as well). This would include road and rail routes along, near, and/or upstream from the Great Lakes shorelines. Accidents or attacks upon these transports near the Great Lakes shores, or on tributaries that flow into the Great Lakes, could result in large-scale releases of hazardous radioactivity that could contaminate those surface waters, and points downstream.

But passage of H.R. 3053 would also facilitate the launch of potential barge shipments of high-risk, highly radioactive, irradiated nuclear fuel on the surface waters of the Great Lakes themselves.

As the attached background details, DOE revealed its plans for potential barge shipments on Lake Michigan, bound for Yucca Mountain, Nevada. Specifically, in its February 2002

Final Environmental Impact Statement for the Yucca Mountain dumpsite proposal, DOE proposed barge shipments from the Palisades atomic reactor to the Port of Muskegon, Michigan, as well as from Wisconsin's three commercial atomic reactors (Kewaunee, and Point Beach Units 1 and 2) to the Port of Milwaukee, Wisconsin.

As the backgrounder warns, the specter of a barge sinking – whether accidentally, or due to intentional attack – could well test the integrity of the shipping container to the breaking point. If the container breaches, disastrous amounts of volatile, hazardous radioactivity could escape, threatening the drinking water supply for millions in multiple states downstream.

There is an even more nightmarish risk. There is enough fissile Uranium-235, and Plutonium-239, present in the irradiated nuclear fuel, that if a critical mass formed in the barge sinking disaster, the neutron moderating properties of infiltrating water could spark an inadvertent chain reaction. This would exacerbate hazardous radioactive releases from a breach of the container. But it would also make emergency response a suicide mission, due to the fatal gamma and neutron radiation emitted from the chain reaction to persons at close enough distance. After all, the breach, by definition, would have negated the cask's radiation shielding.

Our warning to you is delivered in light of the Upton-Dingell amendment to H.R. 3053. This amendment is now part and parcel of this bill, after its passage by the U.S. House Energy & Commerce Committee on June 28, 2017.

The “AMENDMENT TO H.R. 3053, OFFERED BY MRS. DINGELL AND MR. UPTON,” simply reads:

SEC. 604. SENSE OF CONGRESS REGARDING STORAGE OF NUCLEAR WASTE NEAR THE GREAT LAKES.

It is the Sense of Congress that the governments of the United States and Canada should not allow permanent or long-term storage of spent nuclear fuel or other radioactive waste near the Great Lakes.

It is our strongly held conviction that this “SENSE OF CONGRESS...AMENDMENT” provides far too little benefit, in return for the irradiated nuclear fuel transport risks described above, which would be authorized and accelerated by passage of H.R. 3053.

Our groups all agree that “permanent storage” (which effectively means disposal) of spent nuclear fuel (also called irradiated nuclear fuel, which is highly radioactive), or other radioactive waste for that matter, near the Great Lakes, is a non-starter. This is why many of our groups have actively campaigned against the Ontario Power Generation Deep Geologic Repository for the past 16 years, since it was first proposed. We appreciate your leadership in the bicameral, bipartisan congressional effort to block OPG's DGR.

But we point out that irradiated nuclear fuel can get no closer to the Great Lakes, than sailing upon its very surface waters, on barges. Except, perhaps, by leakage into the Great Lakes themselves – as from a transport disaster. An accident or attack that releases the

contents of an irradiated nuclear fuel shipment into the Great Lakes could potentially harm millions downstream, via hazardous radioactive contamination of their drinking water supply. H.R. 3053 facilitates the launch of such unprecedented shipments, and in large numbers (up to 453 rail-sized casks, via barge, on Lake Michigan!), and for this reason alone must be blocked.

We also must point out that U.S. Representative Fred Upton (Republican-Michigan) had been conspicuous by his absence, for several long years, in the bipartisan, bicameral efforts in the U.S. Congress to oppose OPG's DGR. While better late than never, only late last year did he add his signature to such congressional efforts, for the very first time.

In addition, Rep. Upton has contradicted the spirit and letter of his own amendment, not for years, but for decades. Regarding *"long-term storage of spent nuclear fuel...near the Great Lakes,"* Rep. Upton, first as a long serving subcommittee chairman (or ranking member), with oversight on nuclear power, and then as long serving U.S. House Energy & Commerce Committee chairman, enthusiastically supported the operation of atomic reactors, most especially in his own congressional district (Palisades, as well as Cook Units 1 and 2), but also elsewhere across the country. This includes many other still-operating reactors *"near the Great Lakes,"* including the Point Beach Units 1 and 2 in Wisconsin mentioned above, Fermi Unit 2 in southeast Michigan, the Davis-Besse and Perry atomic reactors in Ohio, and several operating reactors in upstate New York (Ginna, FitzPatrick, and Nine Mile Point Units 1 and 2). All of these listed reactors are not just *"near the Great Lakes"* – they are immediately upon the very shorelines of the Great Lakes!

And it should go without saying that operation of atomic reactors inevitably generates large amounts of highly radioactive irradiated nuclear fuel – around 20 to 30 metric tons' worth, per reactor, per year, in fact. Such inventories have simply piled up at Great Lakes shoreline reactors over the years, and now decades, mounting into the many thousands of metric tons' worth.

In Rep. Upton's own congressional district, there is now likely more than 700 metric tons of irradiated nuclear fuel stored at Palisades, and another 1,700 metric tons stored at Cook nuclear power plant. Whether stored in indoor wet pools, vulnerable to catastrophic releases of hazardous radioactivity, as due to fire -- or stored in dry casks of questionable structural integrity due to defects, and accelerated degradation, related to widespread quality assurance violations during design and fabrication – irradiated nuclear fuel on-site at reactors represents potential disasters waiting to happen.

This risk even extends to now permanently shutdown atomic reactors (Zion 1 and 2 in Illinois; Kewaunee, Wisconsin; Big Rock Point, Michigan, to name a few). Whether stored in pools, or dry casks, irradiated nuclear fuel is inherently high-risk to health, safety, and the environment.

Highly radioactive waste catastrophes could unfold due to natural disaster (as at Palisades, where dry casks have been in violation of U.S. Nuclear Regulatory Commission earthquake safety regulations for nearly a quarter-century), accident (a crane malfunction and operator error nearly caused a heavy-load drop into the pool at Palisades in October 2005, risking a drain down of the cooling water supply, which would likely have sparked a very

catastrophic fire and large-scale hazardous radioactivity release), or terrorist attack (Palisades, and also Cook, have suffered numerous security breaches, dating back years and decades, and continuing right up to the recent times).

(Such problems and incidents listed above, while given as examples within Rep. Upton's own district, are mirrored at many reactors across the Great Lakes, and indeed across the continent. Please also find attached a map, prepared by Anna Tilman of International Institute of Concern for Public Health, and John Jackson of Great Lakes United, showing the locations of operating, and shutdown, atomic reactors on the Great Lakes shorelines, as well as other nuclear facilities, including current, and targeted – such as the OPG DGR – radioactive waste sites.)

Such irradiated nuclear fuel risks have existed at Palisades since early 1971 (for nearly 47 years now), and at Cook since 1974 (for 43 years). Thus, Rep. Upton's career-long (1987 to the present, 30 years) support for reactor operations, their inevitable irradiated nuclear fuel generation, and the consequent, inescapable on-site storage, starkly violates his very own amendment's opposition to *"long-term storage of spent nuclear fuel...near the Great Lakes."* Nearly a half-century of high-risk radioactive waste generation and storage on the Great Lakes shore, in his very own district, certainly qualifies as *"long-term storage of spent nuclear fuel...near the Great Lakes."* Given Rep. Upton's enthusiastic support for such high-risk *"long-term storage of spent nuclear fuel...near the Great Lakes,"* in his very own district at Palisades and Cook, and beyond, elsewhere on the Great Lakes shore, his amendment must be taken with a grain of salt.

For her part, Rep. Debbie Dingell (Democrat-Michigan) has only served in Congress since 2015. And we appreciate her quick involvement, upon taking office, to oppose OPG's DGR, upstream of her own district. Of course, she cannot, and should not, be held accountable for the actions of her predecessor in the congressional seat, even though John Dingell has been her husband for 36 years.

But it must be pointed out that Rep. John Dingell (Democrat-Michigan), who held the seat for 60 years (1955-2015) – or held immediately adjacent seats, as congressional district lines shifted over the many decades – was as avid a supporter of nuclear power as is Rep. Upton. Rep. John Dingell supported Fermi 1 (which had a partial core meltdown on October 5, 1966), Fermi 2 (a super-sized Fukushima Daiichi twin design, General Electric Mark I Boiling Water Reactor, operating since 1988), and even the proposed new Fermi 3 atomic reactors, located in southeast Michigan, in (or near) his district. And similar to Rep. Upton, Rep. John Dingell had few to no qualms about long term, on-site storage of irradiated nuclear fuel on the Great Lakes shoreline over all those many decades.

For her part, Rep. Debbie Dingell has supported Fermi 2's ongoing operations, as well as the construction and eventual operation of the proposed new Fermi 3, since taking office in 2015.

Support for reactor operations means support for *"long-term storage of spent nuclear fuel...near the Great Lakes,"* as spelled out above.

In conclusion, the bad in H.R. 3053 far outweighs what little good the Upton-Dingell amendment would achieve. Such a Resolution, stating “*It is the Sense of Congress that the governments of the United States and Canada should not allow permanent or long-term storage of spent nuclear fuel or other radioactive waste near the Great Lakes,*” should be either stand alone, or else incorporated as part of legislation that protects public health, safety, and the environment. H.R. 3053, with its authorization and acceleration of unprecedented, very large numbers of high-risk irradiated nuclear fuel road and rail shipments near or upstream of the Great Lakes, and barge shipments on Lake Michigan, would do the opposite.

We urge you to oppose H.R. 3053. And we take this opportunity to thank you, once again, for your leadership in opposing OPG’s DGR.

If you or your staff have any questions, please don’t hesitate to contact Kevin Kamps, Radioactive Waste Specialist at Beyond Nuclear (and a board member of Don’t Waste Michigan, representing his hometown Kalamazoo chapter, as well as an advisory board member of Citizens for Alternatives to Chemical Contamination) at (240) 462-3216, or kevin@beyondnuclear.org.

Sincerely,

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